

SIEMENS

PATENT

Attorney Docket No. 2002P15569WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor: Werner Agne et al.) Group Art Unit: 2854
)
Serial No.: 10/554,034) Examiner: Ren Luo Yan
)
Filed: August 8, 2006) Confirmation No. 7805

Title: PRINTING PRESS AND METHOD FOR OPERATING A PRINTING PRESS

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Sir:

APPELLANT'S BRIEF UNDER 37 CFR 41.37

This brief is in furtherance of the Notice of Appeal filed in this application on April 11, 2011.

1. REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in this Appeal is the assignee, Siemens Aktiengesellschaft.

2. RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)

There is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

3. STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)

Claims pending: 11-12, 18, 22-23, 29, 31 and 34.

Claims cancelled: 1-10, 13-17, 19-21, 24-28, 30 and 32-33.

Claims withdrawn but not cancelled: None.

Claims allowed: None.

Claims objected to: None.

Claims rejected: 11-12, 18, 22-23, 29, 31 and 34.

The claims on appeal are 11-12, 18, 22-23, 29, 31 and 34.

4. STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)

A response without amendment was submitted under 37 CFR 1.116 on 3 March 2011 and was considered by the Examiner, but the rejections were sustained.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)

This invention relates generally to a printing press (page 7 line 9). In one embodiment, **independent claim 1** is directed to a printing press DM (page 7 line 9). The printing press DM includes a print unit DE1-DE3 (page 7 line 18), a drive unit A1-A29 assigned to the print unit (page 8 lines 4-5), and a control unit RE1-RE29 for regulating the drive unit A1-A29 (page 9 lines 2-3). The printing press DM further includes a print mark measuring device ME1-ME3 and/or register mark measuring device and/or a register measuring device RME including a camera configured to record or pick up a print mark of a paper track (page 3 lines 15-23). The print mark measuring device ME1-ME3 and/or the register mark measuring device and/or the register measuring device RME includes an evaluation unit AE and are directly connected to the control unit RE1-RE29 to transmit a signal of the print mark to the control unit (page 10, lines 5-

7). A correction factor is determined by the control unit RE1-RE29 based on the print mark signal to regulate the movement of the drive unit A1-A29 and improve a print image of the print mark (Abstract, page 5 lines 20-22).

In another embodiment, **independent claim 29** is directed to a method for operation of a printing press DM (page 7 line 9). The method includes providing a print unit DE1-DE3 (page 7 line 18), providing a drive unit A1-A29 assigned to the print unit DE1-DE2 (page 8 lines 4-5), and providing a control unit RE1-RE29 for regulating the drive unit A1-A29 (page 9 lines 2-3). The method further includes providing a print mark measuring device ME1-ME3 and/or register mark measuring device and/or a register measuring device RME that includes a camera, to record or pick up a print mark of a paper track (page 3 lines 15-23). The print mark measuring device ME1-ME3 and/or the register mark measuring device and/or the register measuring device RME includes an evaluation unit AE (page 10 lines 5-7). The method further includes transmitting a print mark signal and/or the register mark signal including data of the print mark from the print mark measuring device ME1-ME3 and/or the register mark measuring device RME to the control unit A1-A29 (page 10, lines 5-7) or transmitting a register measuring signal from the register measuring device RME to the control unit (page 6 lines 23-26). A correction factor for regulating the movement of a drive unit A1-A29 is determined by the control unit RE1-RE29 based on the print mark signal to regulate the movement of the drive unit A1-A29 to improve a print image of the print mark (Abstract, page 5 lines 20-22).

In another embodiment, **independent claim 31** is directed to a printing press DM (page 7 line 9). The printing press DM includes a print unit DE1-DE3 (page 7 line 18) and a drive unit A1-A29 assigned to the print unit (page 8 lines 4-5). The drive unit A1-A29 includes a motor, a power converter and an integrated control unit for regulating the drive unit A1-A29, and the control unit RE1-RE29 includes an integrated evaluation unit (page 8, lines 8-10, page 10 line 2). The printing press DM also includes a print mark measuring device ME1-ME3 and/or register mark measuring device and/or a register measuring device RME including a camera configured to record or pick up a print mark of a paper track (page 3 lines 15-23). The print mark measuring device ME1-ME3 and/or the register mark measuring device and/or the register measuring device RME are directly connected to the control unit RE1-RE29 to transmit a signal of the print mark to the control unit RE1-RE29 (page 10 lines 5-7). A correction factor is calculated by the control unit RE1-RE29 based on the print mark signal to regulate the movement of the drive unit

A1-A29. The print mark measuring device ME1-ME3 and/or the register mark measuring device and/or the register measuring device RME are connected to the control unit RE1-RE29 by a field bus system or a serial link (page 10 line 7).

6. GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL - 37 CFR 41.37(c)(1)(vi)

A. Claims 11-12, 18, 22-23 and 29 stand rejected under 35 U.S.C. §103 as being unpatentable over Kot (U.S. Patent No. 7,131,379) in view of Ohno (U.S. Patent No. 5,813,333), Siegl (DE 19723059) "DE '059" and Tokiwa (U.S. Patent No. 6,626,102).

B. Claims 31 and 34 stand rejected under 35 U.S.C. §103 as being unpatentable over Kot (U.S. Patent No. 7,131,379) in view of Ohno (U.S. Patent No. 5,813,333) and Tokiwa (U.S. Patent No. 6,626,102).

7. ARGUMENT 37 CFR 41.37(c)(1)(vii)

Arguments are applicable to all claims:

The rejections of all claims rely on at least a proposed combination of the Kot, Ohno and Tokiwa references. The following arguments demonstrate that the proposed combination of the Kot, Ohno and Tokiwa references is defective, and thus that the rejections of all claims under both grounds for rejection are defective. Claim 11 is argued as being representative of all claims for the purposes of the arguments presented herein

A. Response to Rejection of Claims 11-12, 18, 22-23 and 29 under 35 U.S.C. §103

The Appellee rejected these claims under 35 USC §103(a) as being unpatentable over Kot in view of Ohno, DE 19723059 and Tokiwa. Independent claim 11 recites a print mark measuring device including a camera configured to record or pick up a print mark of a paper track. Additionally, independent claim 11 recites that the print mark measuring device includes an evaluation unit and is directly connected to the control unit to transmit a signal of the print mark to the control unit. Additionally, independent claim 11 recites that a correction factor is determined by the control unit based on the print mark signal to regulate the movement of the

drive unit and improve a print image of the print mark. None of the Kot, Ohno, DE '059 or Tokiwa references, alone or in combination, disclose these recitations and accordingly, independent claim 11 is patentable.

The Appellee conceded that Kot fails to disclose: (1) a print mark measuring device including a camera configured to record or pick up a print mark of a paper track; (2) that the print mark measuring device includes an evaluation unit; and (3) that a correction factor is determined by the control unit based on the print mark signal to regulate the movement of the drive unit and improve a print image of the print mark (Final Office Action, p. 3). To account for these noted deficiencies, the Appellee cited to the Ohno, DE '059 and Tokiwa references. However, as discussed below, the citations to the Ohno, DE '059 and Tokiwa references fail to account for these noted deficiencies, and accordingly, the rejection of independent claim 11 is fatally deficient.

As discussed above, the Appellee acknowledges that Kot fails to disclose a print mark measuring device including a camera configured to record or pick up a print mark of a paper track. To account for this noted deficiency, the Appellee contended that Ohno discloses a CCD camera 100,150 and suggested that it would have been obvious to modify Kot and substitute the register measuring device 13 with the CCD camera 100,150 of Ohno (Final Office Action, p. 3). Kot discloses the register measuring device 13, to supply "actual value signals for the register deviations r_u, r_s in the circumferential and lateral direction to the control and regulating device 12." Upon receiving the register deviations r_u, r_s , a comparator 18 within the control and regulating device 12 compares the register deviations r_u, r_s with desired or nominal value signals w_u, w_s (col. 4, lines 20-23). Kot expressly teaches that, based on the above-comparison by the comparator 18, "comparison signals are used to form actuating variables s_s, s_u , which are fed to the register adjusting devices 10,11" to correct the x and y displacement (col. 4, lines 24-26). Indeed, if the register measuring device 13 of Kot were replaced with a CCD camera 100, the CCD camera would provide image data, not the register deviations r_u, r_s , to the comparator 18 of the control and regulating device 12. As a result, the comparator 18 would be unable to compare the image data from the CCD camera 100 with the nominal value signals w_u, w_s , in order to determine the necessary actuating variables s_s, s_u to displace the adjusting devices 10,11. Kot emphasizes that its intended purpose is to adjust the register devices 10,11, so that image fields are in register with one another (Abstract, col. 2 lines 26-32). Thus, the proposed modification

of Kot would prevent the adjustment of the register devices 10,11. As the Appellee is aware, “If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)” MPEP §2143.01. Indeed, the proposed modification would render Kot unsatisfactory for its intended purpose of adjusting the register devices 10,11 so the image fields are in register, and thus the proposed modification cannot form the basis of the rejection of independent claim 11, per MPEP §2143.01. Accordingly, the rejection of independent claim 11 is fatally deficient, for this reason alone.

As discussed above, the Appellee conceded that Kot fails to disclose that the print mark measuring device includes an evaluation unit. To account for this noted deficiency, the Appellee contended that the Appellants’ specification represents that DE ‘059 discloses “a printing press with color register control wherein the register marks printed on the track are picked up by sensors and are evaluated in a measurement head of the sensors.” (Final Office Action, p. 3). The Appellee misrepresented Appellants’ specification. In fact, Appellants’ specification merely discusses that DE ‘059 discloses a cylinder printing press (col. 1 line 16); that a color register does not move outside a tolerance area (col. 1 lines 28-29); and that a sensor signal is transferred to a register controller (col. 4 lines 29-31). Although Appellants’ specification does discuss that register marks printed on the track are picked up by sensors and evaluated in a measurement head of the sensor (col. 2 lines 10-12), this appears in the “Summary of the Invention” and does not reference DE ‘059. Accordingly, the Appellee’s subsequent proposed modifications of Kot based on DE ‘059 are fatally deficient, as they are based on a false contention. Indeed, none of the Kot, Ohno, DE ‘059 or Tokiwa references, alone or in combination, disclose that the print mark measuring device includes an evaluation unit and is directly connected to the control unit to transmit a signal of the print mark to the control unit. Accordingly, the rejection of independent claim 11 is fatally deficient, for this reason alone.

As discussed above, the Appellee conceded that Kot fails to disclose that a correction factor is determined by the control unit based on the print mark signal to regulate the movement of the drive unit and improve a print image of the park mark. To account for this noted deficiency, the Appellee contended that Tokiwa discloses “a correction factor ($Y_n+Y_4+Y_3$)...by the control unit...to regulate the movement...of the drive unit” and cited to col. 16, lines 5-24 in support thereof. Tokiwa discloses that the feedback speed signal output section 39 “integrates

the pulse signals output by the encoder 6, calculates a value S2 proportional to the rotational speed of the driving means M" using the equation cited by the Appellee at col. 16, line 25. Indeed, the S2 value is based on the pulse signals that are proportional to the amount of rotational angular displacement of the driving means M. Thus, the S2 value is expressly based on the rotational angular displacement of the driving means M, and is not based on a print mark signal or a recorded print mark by a camera, as recited in independent claim 11. The Appellants repeated these arguments in the previous two Responses and argued that this cited portion of Tokiwa fails to disclose the above claim language of independent claim 11 (November 2010 Response, p. 3-4; March 2011 Response, p. 4). The Appellee failed to even address the Appellant's arguments in the January 2011 Final Office Action and in the March 2011 Advisory Action, despite the recommendation in MPEP 707.07(f) that the Appellee "should...take note of applicant's argument and answer the substance of it." Indeed, the Appellee failed to refute the Appellant's arguments. Accordingly, none of the prior art references, alone or in combination, disclose that a correction factor is determined by the control unit based on the print mark signal to regulate the movement of the drive unit and improve a print image of the park mark, as recited in independent claim 11.

The Appellee further contended that it would have been obvious to modify the control and regulation device 12 of Kot such that it is capable of computing the value S2 taught in Tokiwa proportional to the rotational speed of the adjusting devices 10,11 of Kot "for the purpose of increasing the accuracy and speed in controlling the drive unit." (Final Office Action, p. 4). However, even if such a modification was obvious, it would destroy the purpose and/or operability of Kot. The control and regulating device 12 in Kot compares actual deviations of the marks 9, 15 and 16 relative to the line 14, with desired deviations, and transmits actuating variables to the adjusting devices 10,11, based on this comparison. Thus, Kot emphasizes that the adjusting devices 10,11 should be actuated in the appropriate x,y, directions, based on this comparison. If the Appellee's suggested modification of Kot were performed, in which the control and regulating device 12 were instead assigned to determine some corrective rotational speed of the adjusting device 10,11, the control and regulating device 12 would disregard the deviations of the marks 9, 15 and 16 relative to the line 14, as well as a determination of an actuating variable of the adjusting devices 10,11 in the x,y directions, and instead would determine some corrective rotational speed of the adjusting devices 10,11. Since the suggested

modification would render Kot unsatisfactory for its intended purpose, it cannot form the basis of the modification of Kot. MPEP §2143.01. Accordingly, independent claim 11 is patentable.

Accordingly, independent claim 11 is patentable, and all other claims rejected under this grounds for rejection rise or fall with claim 11.

B. Response to Rejection of Claims 31 and 34 under 35 U.S.C. §103

The arguments stated above with regard to the deficiencies of the proposed combination of Kot, Ohno and Tokiwa are incorporated herein, and accordingly, claims 31 and 34 rise or fall with claim 11.

8. CLAIMS APPENDIX - 37 CFR 41.37(c) (1) (viii).

A copy of the claims involved in this appeal is attached as a claims appendix under 37 CFR 41.37(c) (1) (viii).

9. EVIDENCE APPENDIX - 37 CFR 41.37(c) (1) (ix)

None is required under 37 CFR 41.37(c) (1) (ix).

10. RELATED PROCEEDINGS APPENDIX - 37 CFR 41.37(c) (1) (x)

None is required under 37 CFR 41.37(c) (1) (x).

Respectfully submitted,

Dated: 05/06/11

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APPENDIX OF CLAIMS ON APPEAL

11. A printing press, comprising:
 - a print unit;
 - a drive unit assigned to the print unit;
 - a control unit for regulating the drive unit; and
 - a print mark measuring device and/or register mark measuring device and/or a register measuring device including a camera configured to record or pick up a print mark of a paper track, wherein
 - the print mark measuring device and/or the register mark measuring device and/or the register measuring device comprises an evaluation unit and are directly connected to the control unit to transmit a signal of the print mark to the control unit;
 - wherein a correction factor is determined by the control unit based on the print mark signal to regulate the movement of the drive unit and improve a print image of the print mark.
12. The printing press in accordance with claim 11, wherein the print mark measuring device and/or the register mark measuring device and/or the register measuring device are connected by a means for signal transmission to the control unit.
18. The printing press in accordance with claim 11, wherein the print mark measuring device and/or the register mark measuring device and/or the register measuring device are connected to the control unit by a field bus system or a serial link.
22. The printing press in accordance with claim 12, wherein a field bus system or a serial link is provided as means for signal transmission.
23. The printing press in accordance with claim 11, wherein the control unit has a master functionality with regard to further drive units or with regard to further control units.

29. A method for operation of a printing press, comprising:

- providing a print unit;
- providing a drive unit assigned to the print unit;
- providing a control unit for regulating the drive unit;
- providing a print mark measuring device and/or register mark measuring device and/or a register measuring device that comprises a camera, to record or pick up a print mark of a paper track, wherein
 - the print mark measuring device and/or the register mark measuring device and/or the register measuring device comprises an evaluation unit; and
 - transmitting a print mark signal and/or the register mark signal including data of the print mark from the print mark measuring device and/or the register mark measuring device to the control unit, or
 - transmitting a register measuring signal from the register measuring device to the control unit;
- wherein a correction factor for regulating the movement of at least one drive unit is determined by the control unit based on the print mark signal to regulate the movement of the drive unit to improve a print image of the print mark.

31. A printing press, comprising:

a print unit;

a drive unit assigned to the print unit, wherein the drive unit comprises a motor, a power converter and an integrated control unit for regulating the drive unit, and the control unit comprises an integrated evaluation unit; and

a print mark measuring device and/or register mark measuring device and/or a register measuring device including a camera configured to record or pick up a print mark of a paper track, wherein the print mark measuring device and/or the register mark measuring device and/or the register measuring device are directly connected to the control unit to transmit a signal of the print mark to the control unit;

wherein a correction factor is calculated by the control unit based on the print mark signal to regulate the movement of the drive unit;

and wherein the print mark measuring device and/or the register mark measuring device and/or the register measuring device are connected to the control unit by a field bus system or a serial link.

34. The printing press in accordance with claim 31, wherein the control unit has a master functionality with regard to further drive units or with regard to further control units.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.